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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,930	12/14/2000	Naomi Noda	WATK:205	5806

7590 09/16/2003

PARKHURST & WENDEL, L.L.P.  
1421 Prince Street, Suite 210  
Alexandria, VA 22314-2805

EXAMINER

NGUYEN, CAM N

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 09/16/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/735,930

Applicant(s)  
Noda et al.

Examiner  
Cam Nguyen

Art Unit  
1754



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 6/27/03 (an amendment/response)
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 9 6) ☐ Other:

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### **DETAILED ACTION**

1. A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after the final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 6/27/03 has been entered.

2. Applicants' remarks and amendments, filed on June 27, 2003, have been carefully considered. Claim 1 has been amended. Claims 9-11 have been added.

Claims 1-11 are now pending in this application.

### ***Claim Objections***

3. Claims 9 & 10 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 4 & 6. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The subject matter recited in claims 9 & 10 appear to give the same catalytic structure as in claims 4 & 6.

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***Claim Rejections - 35 USC § 112 (Second Paragraph)***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3 & 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Regarding claim 3, it is unclear as to whether the noble metal as recited in claim 3 is the same as or different from the noble metal loaded on the heat-resistant inorganic oxide as now recited in claim 1, lines 2-3. Thus, renders the claim vague and indefinite.

B. Claim 11 recites the limitation "the heat-resistant inorganic material" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindner et al., "hereinafter Lindner", (U.S Pat. 6,348,430 B1) taken together with Deeba et al., "hereinafter Deeba", (US Pat. 6,375,910 B1).

Lindner discloses an exhaust gas catalyst containing two catalytically active layers on a carrier structure: the first layer applied to the carrier structure containing several finely divided solids, one or more highly dispersed alkaline earth metal oxides and at least one platinum group metal, wherein the finely divided solids consists of at least one finely divided oxygen-storing material and at least one other finely component and the platinum group metals are in close contact with all of the constituents in the first layer (see col. 4, ln 26-34); the second layer also contains several finely divided solids and at least one platinum group metal, wherein the finely divided solids in this second layer comprise at least one finely divided oxygen-storing material and at least one other finely divided component and only a portion of these finely divided solids in the second layer is used as support for the platinum group metals in the second layer (see col. 4, ln 48-60). The platinum group metals form the catalytically active components in the catalyst including platinum, palladium, rhodium, osmium, and iridium (see col. 4, ln 36-39). The finely divided components may be oxides of alkaline earth metal, oxides of scandium, yttrium, gallium, indium, silicon, titanium, zirconium, hafnium, germanium, tin, lead, vanadium, niobium, tantalum, chromium, molybdenum, and tungsten (see col. 5, ln 1-5). The carrier structure is taught to be a monolithic honeycomb carrier structure which can be made from cordierite (see col. 1, ln 42-50).

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Regarding claim 1, Lindner does not disclose alkali metal. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated the alkali metal component into the catalyst of Lindner to obtain an improved catalyst because Deeba fairly teaches a similar exhaust gas catalyst utilizing one or more alkali metals as a NO<sub>x</sub> sorbent (see Deeba at col. 23, ln 28-31). Further, a person having the ordinary skill in the art would be motivated to combine the teaching of the Deeba reference with Lindner in view of the advantage that the alkali metals have long been used in the catalyst to remove or reduce nitrogen oxide (NO).

Regarding claims 1 & 3, the claims are met by the teaching of the reference since Lindner discloses that the catalyst contains platinum group metals (see Lindner at col. 4, ln 36-39).

Regarding claims 2, the claim is met by the teaching of the reference because Lindner discloses the same components (see Lindner at col. 5, ln 1-5).

Regarding claims 4 & 9, applicants claiming “the substance is contained in the carrier” is noted. It is considered the claim is met by the teaching of the reference because Lindner teaches that the second layer comprises at least one finely divided oxygen-storing material and at least one other finely divided component and only a portion of these finely divided solids in the second layer is used as support for the platinum group metals in the second layer (see Lindner at col. 4, ln 48-60), wherein the finely divided components disclosed including gallium, silicon, titanium, zirconium, germanium, tin, vanadium, chromium, molybdenum, and tungsten that

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applicants claiming (see Lindner at col. 5, ln 1-5). Thus, Lindner teaches the finely divided solids (or the claimed substance) contained in the carrier.

Regarding claim 5, applicants claiming “the substance is contained in the catalyst layer” is noted. The claim is met by the teaching of the reference because Lindner teaches both the first catalyst layer and the second catalyst layer contain the finely divided solids (or the claimed substance) (see Lindner at col. 4, ln 26-34 & col. 4, ln 48-60).

Regarding claims 6 & 10, applicants claiming “a layer of a the substance is formed between the carrier and the catalyst layer” is also noted. It is considered the claim is met by the teaching of the reference since Lindner teaches a carrier comprising a first catalyst layer and a second catalyst layer, wherein both layers contain the finely divided solids (see Lindner at col. 4, ln 26-34 & col. 4, ln 48-60). Since the first catalyst layer contains the finely divided solids (or the claimed substance) is between the carrier structure and the second catalyst layer, it meets the claimed limitation.

Regarding claims 7 & 8, the claims are met by the teaching of the reference since Lindner discloses the same carrier (see Lindner at col. 1, ln 42-50).

***Response to Amendment***

8. Applicants’ amendment/response filed on 6/27/03 has been considered, but not deemed persuasive in view of the new ground of rejection(s) above and the following reasons.

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First, applicants urged, that “there is no teaching or suggestion in the art of achieving such improved results by using an anchor material for an alkali metal-containing catalyst as claimed” (applicants’ response page 9, second paragraph). This is not found persuasive because applicants have not yet shown or provided the comparative datas for incorporating the alkali metals taught by the Deebea reference would not result in the same catalyst as being claimed.

Secondly, applicants urged, that “the use of the alkali metals of the Deebea reference is an optional” (applicants’ response page 13, second paragraph). This is also noted but not persuasive because the term “optional” does not mean “being excluded from”. Therefore, the alkali metals of the Deebea reference can also be employed.

Thirdly, applicants urged, that “the treating gas and the reaction mechanism of Lindner and Deebea catalyst systems are totally different, etc.” (applicants’ response page 17, last paragraph). This is not found persuasive because the Deebea was relied on to show that the alkali metals are known and have been used for exhaust gas catalyst, which is in the same field of art as in the Lindner reference, thus, provides one of ordinary skill in the art the motivation to combine the teachings of the Deebea reference with the Lindner reference. Also, the rejection was based on a combination of the references together, not individually.

It is the Examiner’s position to conclude that the rejections are still proper, and therefore, maintained.



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9. This is an RCE of applicant's earlier Application No. 09/735,930. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

#### ***Conclusion***

10. Claims 1-11 are pending in the application. Claims 1-11 are rejected. No claims are allowed.

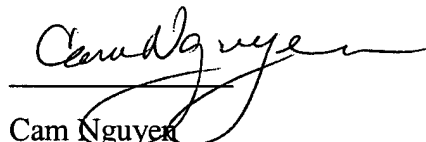
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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (703) 305-3923. The examiner can normally be reached on M-F from 8:30 am. to 6:00 pm, with alternative Monday off.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 (before finals) and (703) 872-9311 (after-final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Nguyen/cnn *can*  
September 12, 2003

  
Cam Nguyen  
Patent Examiner  
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